





Alluvium - Fine-coarse sand, silt, and gravel deposits associated with modern stream deposition.

Freshwater wetlands - Wetland areas where the water table is at or near the land surface and organic-rich sediment accumulates.

Hwm -Marsh

Plb

Landslide deposits - Poorly sorted sand, silt, cobbles and boulders associated with a large landslide.

Ice-contact deposits - Scattered deposits of well-sorted sand and gravel which were formed by meltwater streams flowing between glacial ice and emergent hills.

Glacial fluvial sand and gravel deposits - Sand and gravel deposited by meltwater streams.

> -Pendexter Brook system -Rock Haven Lake system -Balch Pond system Pgbp

Glacial lacustrine deposits - Sediments which accumulated in glacial lakes including delta topsets and delta foresets (Pld), and lake bottom deposits (Plb). In general topsets are coarse sands and gravels, foresets are coarse-medium sand, and bottomsets are fine sands and silts.

Plmd₃ - Fan-delta deposits associated with glacial

Lake Mousam in the Little Ossipee river basin. - Delta deposits associated with the Lake Newfield stage

- Lake bottom deposits associated with Lake Newfield stage. Pled - Delta deposits associated with Lake

Effingham stage.

Pleb - Bottom deposits associated with the Lake Effingham stage. - Lake Effingham deposits, undifferentiated

Plchd₁₋₂ - Delta deposits associated with the Lake Champion stage.

Plcmd - Delta deposits associated with the Lake Cedar Mountain stage.

Esker deposits - Glaciofluvial sediments deposited by meltwater streams flowing through subglacial tunnels. Form narrow ridges up to 60 ft high.

CONTOUR INTERVAL 20 FEET

Pgecm - Cedar Mountain system Pgepb -PendexterBrook system Pgep -Parsonsfield system Pgewm - Wiggin Mountain system - Newfield system Pgebl -Belleau Lake system

End moraines - Thick, bouldery till deposited as ridges at the glacier margin.

Till - An unsorted, unstratified, mixture of glacially deposited sediments ranging from boulders and cobbles to sand, silt, and clay. Material ranges from semiconsolidated to loose.

Thin drift - Areas of thin till with abundant interspersed bedrock outcrops.

Contact - Boundary between map units. Dashed where very approximate.

Streamlined hill - Elongated hill with long axis oriented parallel to ice flow direction. Includes drumlins and roche moutonées.

outflow. Arrow indicates inferred direction of flow.

Large meltwater channel - Channel cut by meltwater stream or glacial lake

Small meltwater channel - Channel cut by meltwater flowing under or adjacent to glacial ice. Arrow indicates inferred direction of flow.

Ice-margin position - Position of the ice margin during stagnation zone retreat. Esker ridge -Shows trend of sand and gravel ridge deposited in a meltwater channel within or beneath glacial ice. Chevrons point in the direction of former

Striations - Striations on the bedrock surface showing the local direction of ice flow. Azimuths in degrees.

Landslide scarp

Kettle Area of many large boulders

USES OF SURFICIAL GEOLOGY MAPS

A surficial geology map shows all the loose materials such as till (commonly called hardpan), sand and gravel, or clay, which overlie solid ledge (bedrock). Bedrock outcrops and areas of abundant bedrock outcrops are shown on the map, but varieties of the bedrock are not distinguished (refer to bedrock geology map). Most of the surficial materials are deposits formed by glacial and deglacial processes during the last stage of continental glaciation, which began about 25,000 years ago. The remainder of the surficial deposits are the products of postglacial geologic processes, such as river floodplains, or are attributed to

human activity, such as fill or other land-modifying features. The map shows the areal distribution of the different types of glacial features, deposits, and landforms as described in the map explanation. Features such as striations and moraines can be used to reconstruct the movement and position of the glacier and its margin, especially as the ice sheet melted. Other ancient features include shorelines and deposits of glacial lakes or the glacial sea, now long gone from the state. This glacial geologic history of the quadrangle is useful to the larger understanding of past earth climate, and how our region of the world underwent recent geologically significant climatic and environmental changes. We may then be able to use this knowledge in anticipation of future similar changes for long-term planning efforts, such as coastal development or waste disposal.

Surficial geology maps are often best used in conjunction with related maps such as surficial materials maps or significant sand and gravel aquifer maps for anyone wanting to know what lies beneath the land surface. For example, these maps may aid in the search for water supplies, or economically important deposits such as sand and gravel for aggregate or clay for bricks or pottery. Environmental issues such as the location of a suitable landfill site or the possible spread of contaminants are directly related to surficial geology. Construction projects such as locating new roads, excavating foundations, or siting new homes may be better planned with a good knowledge of the surficial geology of the site. Refer to the list of related publications below.

OTHER SOURCES OF INFORMATION

- 1. Newton, R. M., 1997, Surficial geology of the West Newfield 7.5-minute, quadrangle, York County, Maine: Maine Geological Survey, Open-File Report 97-62, 7 p.
- 2. Newton, R. M., 1998, Surficial materials of the West Newfield quadrangle, Maine: Maine
- 3. Neil, C. D., 1998, Significant sand and gravel aquifers of the West Newfield quadrangle,
- Maine: Maine Geological Survey, Open-File Map 98-135. 4. Thompson, W. B., 1979, Surficial geology handbook for coastal Maine: Maine Geological Survey, 68 p. (out of print)
- 5. Thompson, W. B., and Borns, H. W., Jr., 1985, Surficial geologic map of Maine: Maine Geological Survey, scale 1:500,000. 6. Thompson, W. B., Crossen, K. J., Borns, H. W., Jr., and Andersen, B. G., 1989, Glaciomarine deltas of Maine and their relation to late Pleistocene-Holocene crustal movements, in Anderson, W. A., and Borns, H. W., Jr. (eds.), Neotectonics of Maine: Maine Geological

Survey, Bulletin 40, p. 43-67.